

In the Claims:

Please amend claims 1, 5, 9, 13-16, 18-20, 22-24, 26-28 and add new claims 33-48 as follows:

1. (Currently amended) A method of rescuing a mammal from a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby rescuing said mammal from a lethal dose of total body irradiation, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are not modified in any way~~primary cultured cells~~.

2. (Original) The method of claim 1, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

3. (Original) The method of claim 2, wherein said mammal is a human.

4. (Original) The method of claim 1, wherein said administration is infusion.

5. (Currently amended) A method of enhancing hematopoiesis in a mammal, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby enhancing hematopoiesis in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are not modified in any way~~primary cultured cells~~.

6. (Original) The method of claim 5, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

7. (Original) The method of claim 6, wherein said mammal is a human.

8. (Original) The method of claim 5, wherein said administration is infusion.

9. (Currently amended) A method of enhancing hematopoietic stem cell differentiation in a mammal given a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby enhancing hematopoietic stem cell differentiation in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are not modified in any way~~primary cultured cells~~.

10. (Original) The method of claim 9, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

11. (Original) The method of claim 10, wherein said mammal is a human.

12. (Original) The method of claim 9, wherein said administration is infusion.

13. (Currently amended) A method of enhancing the hematopoietic recovery in a mammal given a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby enhancing the hematopoietic recovery in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are not modified in any way~~primary cultured cells~~.

14. (Currently amended) A method of treating a mammal comprising an ablated marrow, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby treating said mammal comprising an ablated marrow, wherein said isolated marrow stromal cells are administered immediately upon isolation or

following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are not modified in any way~~primary cultured cells~~.

15. (Currently amended) A method of enhancing hematopoiesis in a mammal comprising an ablated marrow, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby enhancing hematopoiesis in said mammal comprising an ablated marrow, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are not modified in any way~~primary cultured cells~~.

16. (Currently amended) A method of increasing survival of a mammal exposed to a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby increasing the survival of a mammal exposed to a lethal dose of total body irradiation, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are not modified in any way~~primary cultured cells~~.

17. (Previously presented) A method of rescuing a mammal from a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby rescuing said mammal from a lethal dose of total body irradiation, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.

18. (Currently amended) The method of claim ~~[[1]]~~17, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

19. (Currently amended) The method of claim ~~[[2]]~~18, wherein said mammal is a human.

20. (Currently amended) The method of claim [[1]]17, wherein said administration is infusion.

21. (Previously presented) A method of enhancing hematopoiesis in a mammal, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby enhancing hematopoiesis in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.

22. (Currently amended) The method of claim [[5]]21, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

23. (Currently amended) The method of claim [[6]]22, wherein said mammal is a human.

24. (Currently amended) The method of claim [[5]]21, wherein said administration is infusion.

25. (Previously presented) A method of enhancing hematopoietic stem cell differentiation in a mammal given a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby enhancing hematopoietic stem cell differentiation in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.

26. (Currently amended) The method of claim [[9]]25, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

27. (Currently amended) The method of claim ~~[[10]]~~26, wherein said mammal is a human.

28. (Currently amended) The method of claim ~~[[9]]~~25, wherein said administration is infusion.

29. (Previously presented) A method of enhancing the hematopoietic recovery in a mammal given a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby enhancing the hematopoietic recovery in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.

30. (Previously presented) A method of treating a mammal comprising an ablated marrow, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby treating said mammal comprising an ablated marrow, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing up for no more than the third passage.

31. (Previously presented) A method of enhancing hematopoiesis in a mammal comprising an ablated marrow, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby enhancing hematopoiesis in said mammal comprising an ablated marrow, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.

32. (Previously presented) A method of increasing survival of a mammal exposed to a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby increasing the survival of a mammal exposed to a lethal dose of total body irradiation, wherein said isolated

marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.

33. (New) A method of rescuing a mammal from a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby rescuing said mammal from a lethal dose of total body irradiation, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for approximately five weeks.

34. (New) The method of claim 33, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

35. (New) The method of claim 34, wherein said mammal is a human.

36. (New) The method of claim 33, wherein said administration is infusion.

37. (New) A method of enhancing hematopoiesis in a mammal, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby enhancing hematopoiesis in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for approximately five weeks.

38. (New) The method of claim 37, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

39. (New) The method of claim 38, wherein said mammal is a human.

40. (New) The method of claim 37, wherein said administration is infusion.

41. (New) A method of enhancing hematopoietic stem cell differentiation in a mammal given a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby enhancing hematopoietic stem cell differentiation in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for approximately five weeks.

42. (New) The method of claim 41, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

43. (New) The method of claim 42, wherein said mammal is a human.

44. (New) The method of claim 41, wherein said administration is infusion.

45. (New) A method of enhancing the hematopoietic recovery in a mammal given a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby enhancing the hematopoietic recovery in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for approximately five weeks.

46. (New) A method of treating a mammal comprising an ablated marrow, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby treating said mammal comprising an ablated marrow, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing up for approximately five weeks.

47. (New) A method of enhancing hematopoiesis in a mammal comprising an ablated marrow, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby enhancing hematopoiesis in said mammal

comprising an ablated marrow, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for approximately five weeks.

48. (New) A method of increasing survival of a mammal exposed to a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby increasing the survival of a mammal exposed to a lethal dose of total body irradiation, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for approximately five weeks.